

CLAIMS

I claim:

1. Planar conveyor belt designed to move along curved trajectories and consisting of a plurality of chain-links (2) including, staggered at the front (3) and at the rear (4) of a central core (5), a succession of slots (6, 7) including each an opening (8, 9) for the passage of a pivot pin (10, 11) ensuring the connection between two successive chain-links (2), at least the openings (8, 9) of the slots (6) at the front (3) or those (7) at the rear (4) being oblong in shape so as to ensure a backlash in a longitudinal direction of a chain-link (2) with respect to another adjacent chain-link, characterized in that at least on the side (14) external to the curved trajectory designed to be followed by the conveyor belt (1), at least some of the chain-links (2) include, in their transverse extension, a chain-link module (18) including, staggered at the front (3A) and at the rear (4A) of a central core (5A), slots (6A, 7A) provided with an oblong opening (8A, 9A) which end, at least on the external most distant side (30, 31) with respect to the median plane (33) of the chain-link module (18), in a semicircular sector (33) the center 34 of which is located on an axis 35, 36 convex in shape of a considerable curve radius, exceeding one meter, seen with respect to said median plane 32.

2. Planar conveyor belt designed to move along curved trajectories and consisting of a plurality of chain-links (2) including, staggered at the front (3) and at the rear (4) of a central core (5), a succession of slots (6, 7) including each an opening (8, 9) for the passage of a pivot pin (10, 11) ensuring the connection between two successive chain-links (2), at least the openings (8, 9) of the slots (6) at the front (3) or those (7) at the rear (4) being oblong in shape so as to ensure a backlash in a longitudinal direction of a chain-link (2) with respect to another adjacent chain-link, characterized in that at least on the side (14) external to the curved trajectory the conveyor belt is designed to follow (1), at least some of the chain-links (2) include, in their transverse extension, a chain-link module (18), consisting of at least two intermediate chain-links (40 ; 41) including, staggered at the front and at the rear of a central core (42 ; 43), slots (44, 45 ; 46, 47), those at the front (44), respectively at the rear (47), of the front (40), respectively rear (41) intermediate chain-link, being provided with an opening (3A, 9A) adapted to the cylindrical cross-section of the pivot pin (10, 11) crossing them, whereas the slots at the rear (45), respectively at the front (45), of the front (40), respectively rear (41) intermediate chain-link, are provided with an oblong opening (48 ; 49) which ends, at least on the external most distant side (50 ; 51) with respect to the median plane (52 ; 53) of the corresponding intermediate chain-link (40; 41), in a semicircular sector (54; 55) the center (56; 57) of which is located on an axis (58 ; 59) convex in shape of a considerable curve radius, exceeding one meter, seen with respect to said median plane, respectively (52; 53), these oblong openings (48 ; 49) being crossed by an intermediate pivot pin section (60).

3. Planar conveyor belt designed to move along curved trajectories and consisting of a plurality of chain-links (2) including, staggered at the front (3) and at the rear (4) of a central core (5), a succession of slots (6, 7) including each an opening (8, 9) for the passage of a pivot pin (10, 11) ensuring the connection between two successive chain-links (2), at least the openings (8, 9) of the slots (6) at the front (3) or those (7) at the rear (4) being oblong in shape so as to ensure a backlash in a longitudinal direction of a chain-link (2) with respect to another adjacent chain-link, characterized in that at least on the side (14) external to the curved trajectory the conveyor belt (1) is designed to follow, at least some of the chain-links (2) include, in their transverse extension, a chain-link module (18) including, staggered at the front (3A) and at the rear (4A) of a central core (5A), slots (6A, 7A) provided with an opening (8A, 9A) adapted to the cylindrical cross-section of the pivot pin (10, 11) crossing them, the core (5A) of these chain-link modules (18) being defined by two juxtaposed bars (19, 20), of which the front bar (19) carries the rear slots (7A) and the rear bar (20) carries the front slots (6A), these bars (19, 20) adopting a symmetric arrangement with respect to the transverse median plane of a chain-link (2) and being defined by two juxtaposed bars (19, 20) of which the front bar (19) carries the rear slots (7A) and the rear bar (20) carries the front slots (6A), these bars (19, 20) adopting a symmetric arrangement with respect to the transverse median plane of a chain-link (2) and being convex in shape facing each other with a considerable curve radius, exceeding one meter.

4. Conveyor belt according to claim 3, characterized in that the chain-link module (18) consists of two basic portions (31, 32) designed to be fitted into each other.

5. Conveyor belt according to claim 3 or 4, characterized in that the length of the slots (6A, 7A) of a chain-link module (18) is so defined as to give to the basic portions (21, 22) it is comprised of a relative mobility in a direction perpendicular to its longitudinal median plane, i.e. in the longitudinal direction of the conveyor belt (1).

6. Conveyor belt according to any of the preceding claims, characterized in that the curve radius of the sides of convex shape of the bars (19, 20) or of the pins (34, 35 ; 58, 59) is chosen in the order of 3 meters.

7. Conveyor belt according to any of the preceding claims, characterized in that a reinforcing chain-link module (18) is manufactured out of plastic.